

2019

MSP and MSPr Redundant Series  
QUICK START

**BayTech<sup>®</sup>**



COPYRIGHT 2019

Bay Technical Associates, Inc

1/1/2019

This is the bare minimum for Outlet Control, follow these steps exactly. If this is a new unit shipped directly from Baytech, follow the steps. If this is a previously own unit, perform a factory reset to clear out any users and passwords still in the unit.

**NOTE: If this is a MASTER/SLAVE setup, do not connect the 8” cable until after the Ethernet port has been set-up.**

### Outlet Controller Configuration:

1. Connect the 9FRJ45PC-4 or 9FRJ45PC-1 adapter to your PC.
2. Connect the supplied rollover flat cable RJ08X007 to the adapter and to the EIA232 serial port on the Baytech MSP device.
3. Use terminal emulation software to access the unit, (i.e. Microsoft Hyper-terminal). Set the PC serial port configuration to the following: **9600 bps, 8 data bits, 1stop bit and no parity.** If your device has a **B/C** switch near the EIA232 port, set it to **‘B’**.
4. If you get only a blinking cursor Press **‘Enter’**. If still only a blinking cursor, Type 5 semi-colons (;), there is a one second delay before the menu is displayed.
5. You should get the Outlet Status menu (**Figure 1**). This is the outlet controller circuits. If you get the Network Menu (**Figure 7**), select option 1, Outlet Control or Unit (MSP 05 (2, 1) . . . 1) to get to the Outlet Status menu.
6. At prompt type **‘config’** and press **‘Enter’**. You should see a menu similar to (**Figure 4**). Select number for the Manage Users option. You should see a menu similar to (**Figure 5**).
7. **IMPORTANT NOTE:** the first user added will be the ADMIN user. Type **“A”** and press **‘Enter’**. Type the name of the admin user. The name is case sensitive.
8. Select the user number. You should see the user in the menu similar to (**Figure 6**).
9. Select **‘Add Outlet(s)’** to add a few outlets (i.e. 1, 2, 4) and press **‘Enter’** or select **‘Add All Outlet’**. A **“Y”** signifies the outlet has been assigned to the user.
10. Press **‘Enter’** you should see a menu similar to (**Figure 5**) with the user name. Repeat steps 7 thru 10 to add other users.
11. Once you have added the users press **‘Enter’** until you get back to the Outlet Status menu, (**Figure 1**). Type **‘Exit’**. With (Microsoft Hyper-terminal) pressing **‘Enter’** will reconnect to the unit outlet controller and it will ask for a use name. If this does not happen close the terminal emulator session and open it again.
12. Type the name of a user to log in. You should see a menu similar to (**Figure 1**). The user will see only the outlets assigned to them.
13. At the prompt type **‘password’** and press **‘Enter’**. You should see prompts similar to (**Figure 3**).
14. Enter the password for the user. Repeat steps 12 thru 14 to add or change the password of the user.

At this point you have enough Outlet Control Configurations to operate this Baytech Device. Continue to the Ethernet Controller Configuration if your unit has an Ethernet port.

This is the bare minimum for Ethernet Control. If this is a new unit shipped directly from Baytech, follow the steps. If this is a previously own unit, perform a factory reset to clear out any users and passwords still in the unit. The System Administrator should tell you to use DHCP or provide you an IP Address, Subnet Mask, and Gateway Address. **NOTE: default IP Address is 0.0.0.0**

## Ethernet Configuration:

Before continuing your System Administrator needs to tell you to use DHCP or give you an IP Address, Subnet Address, and Gateway Address.

1. If this Baytech device has an Ethernet port, at the prompt of any menu type five Attention Characters (factory default is the semi-colon, {;}). The Attention Character will not echo on the screen. You should see a menu similar to **(Figure 7)**.
2. Select 'C' for the configuration menu. You should see a menu similar to **(Figure 8)**.
3. Select the number for 'Login Setup' option. You should see a menu similar to **(Figure 9)**.
4. Select the number for 'Manage Users' option. You should see a menu similar to **(Figure 12)**.
5. **NOTE: The 'root' user can not be deleted.**
6. Select 'A' to add user. Type the name and password at the prompts.
7. Press 'Enter' until get to the 'Login Setup Menu' **(Figure 9)**.
8. Select 'Access Control' to enable or disable the Tenet and Serial Login Prompt **(Figure 10)**.
9. Press 'Enter' until you get the Configuration menu **(Figure 7)**.
10. Select 'Network Port Configuration' option. You should see a menu similar to **(Figure 13)**.
11. If your System Administrator requires you to use DHCP, then select 'DHCP Enable/Disable' and type "Y" to enable DHCP. If you wish to assign a static IP address to this unit, Disable the DHCP and go to step 15.
12. Press 'Enter' until you are asked to 'Accept Changes'. Type "Y" to accept changes or "N" to decline changes.
13. After Accepting or Declining Changes you should get the Network Access Menu **(Figure 7)**.
14. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.
15. If you disabled the DHCP in step 11, you should see a menu similar to **(Figure 13)**.
16. Select the 'IP Address' option and type the assigned IP address and press 'Enter'.
17. Select the 'Subnet Mask' option and type the assigned subnet mask address and press 'Enter'.
18. Select the 'Gateway Address' option and type the assigned Gateway address and press 'Enter'.
19. Press 'Enter' until you are asked to 'Accept Changes'. Type "Y" to accept changes.
20. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.
21. You should be prompted for a user name and password, similar to **(Figure 11)**
22. **If your unit is to be set up for a MASTER/SLAVE configuration, connect the 8" cable between the serial port of the Master and Slave units.**

At this point you have enough basic configurations needed to operate this Baytech unit.

**Status Screen:** Once the serial connection is made using the terminal software, the screen will display the inherent state of the outlets, Current and Maximum Detected Current both in Amps, circuit breaker, Internal temperature of the unit, and external temperature sensors if connected. The number of outlets displayed depends on the MSP model.

Figure 1: Outlet Status

```

-----
| Input/Load | True RMS | Peak RMS |
| Circuit   | Current  | Current  |
-----
| Circuit 1  | 0.0 A   | 0.0 A   |
| Circuit 2  | 0.0 A   | 0.1 A   |
-----

Int. Temp: 82.4 F
Switch 1: Open 2: Open

1)...MOD 1 Outlet 1 : On   Locked  2)...MOD 1 Outlet 2 : On   Locked
3)...MOD 1 Outlet 3 : On   Locked  4)...MOD 1 Outlet 4 : On   Locked
5)...MOD 2 Outlet 1 : On   Locked  6)...MOD 2 Outlet 2 : On   Locked
7)...MOD 2 Outlet 3 : On   Locked  8)...MOD 2 Outlet 4 : On   Locked
9)...MOD 3 Outlet 1 : On   Locked 10)...MOD 3 Outlet 2 : On   Locked
11)...MOD 3 Outlet 3 : On   Locked 12)...MOD 3 Outlet 4 : On   Locked
13)...MOD 4 Outlet 1 : On   Locked 14)...MOD 4 Outlet 2 : On   Locked
15)...MOD 4 Outlet 3 : On   Locked 16)...MOD 4 Outlet 4 : On   Locked

Type Help for a list of commands

MSP-05>

```

**Help Menu:** Type *Help* followed by a <CR> to view the line commands for the MSP outlets.

Figure 2: Outlet Help

```

Status <cr>  --MSP-05 Status
Config <cr>  --Enter configuration mode
Current <cr> --Display True RMS Current
Voltage <cr> --Display True RMS Voltage
Power <cr>   --Display Average Power
Clear <cr>   --Reset the maximum detected current
Temp <cr>    --Read current temperature
Logout <cr>  --Logoff
Logoff <cr>  --Logoff
Exit <cr>    --Logoff
Password <cr> --Changes the current user password
Whoami <cr>  --Displays the current user name
Unitid <cr>  --Displays the unit ID

Type Help for a list of commands

MSP-05>

```

**Password setting:** Once you have logged out and log back in as a user or as the administrator, you can then set the password to gain access. Type **“Password”**<cr>

Figure 3: Outlet Password

```
MSP>password
Enter new Password: *****
Re-Enter new Password: *****
Type Help for a list of commands
MSP>
```

**Power Controller Configuration Menu:** To select the configuration menu, type “**config**” at the prompt.



**NOTE:** If the unit displays with the following message, “**Configuration mode in use**” A user in the other port is in the “Configuration” menu.

Figure 4: Outlet Configuration

```
MSP>config

1)...Manage Users           Add/Delete/Rename, assign outlets
2)...Change Outlet Name    Select an outlet to change its name
3)...Enable/Disable Confirmation (Y/N)
4)...Enable/Disable Status Menu Opening status of outlets
5)...Change Unit ID        As written
6)...Change Alarm Threshold As written
7)  Change Dispaly Orientation Rotates display 180 degrees
X)...Exit
```

### Manage User

The User Menu allows the admin user to add and delete users, change passwords, and change the outlet list that displays a user’s access to prescribed outlets. Select “Manage Users,” from the configuration menu and the following menu appears if the unit has been reset or initial setup:

Figure 5: Outlet Manage User

```
-----
|      User      |      Assigned Outlets      | | | |
|                | C1,1| C1,2| C1,3| C1,4|
|                |-----|
A)...Add User
D)...Delete User
R)...Rename User
C)...Change Circuit Group
Enter user number to assign Outlets, A, D, C or R.
Enter Request:
```



**NOTE:** User in position (1) will be the ‘admin user’ for the outlets. Older units will not display the ‘delete’ option until a user is added.

### Add a User:

Select A), “Add user,” from the User Management Menu. Enter the name of the user to be added, followed by <cr>.



**NOTE:** User name is case sensitive.

### Assigned Outlets

Select a user number from the User Management Menu, the MSP unit will display the Assign Outlet Menu:

Figure 6: Outlet Assignment

User	Assigned Outlets			
	C1,1	C1,2	C1,3	C1,4
1) engineer	N	N	N	N

  

1)...Add Outlet(s)	Add individual Outlets (X, X, X, X)
2)...Remove Outlet(s)	Remove individual Outlets
3)...Add All Outlets	Add all outlets to above user
4)...Remove All Outlets	Remove all Outlets from the above user
C) Change Circuit Group	Move to next Circuit Group of Outlets

Enter Request:



**NOTE:** If an outlet user's list is changed while the user is logged in, their outlet list changes dynamically. If enabled, an updated outlet status report will be issued. "Y" means the outlet is assigned to the user. "N" means the outlet is NOT assigned to the user.

**Change Outlet Name:** Allows the administrator to change the name of the outlets.

**Enable/Disable Confirmation:** Enables/Disables the confirmation of choices. Example, "Turn off all outlets [Y/N]?"

**Enable/Disable Status Menu;** Enables/Disables whether outlet status menu is displayed.

**Change Unit ID:** Allows the user to change the name of the unit. The defaulted is something similar to MSP05. Allows the user to personalize or customize name or location, up to 31 alphanumeric characters.

**Change Alarm Threshold:** The Alarm Threshold is the value set that sounds the amperage alarm when it reaches or exceeds the amperage value indicated.

**Change Display Orientation:** Flips the display 180 degrees.

### Universal Ethernet Controller Configuration:

**Access Menu:** The Access Menu screen, allows for Outlet Operations, Network Configuration, or Disconnection. To access the Network Configuration Screen, **type five Attention Characters.**



**NOTE:** For initial network access, the IP address, subnet mask, and gateway must be configured from the serial port. **Default setting is 0.0.0.0.**

Figure 7: Network Controller

```

Module: 1
Attention Character: ;
MSP05          (2 ,1).....1
Status.....S          Unit Status
Configure.....C       Unit Configuration menu
Unit Reset.....RU     Terminates external connections,
                        does not affect outlet states.

Logout.....T

Enter Request :s
    
```

Figure 8: Network Configuration

```

Copyright(C) Bay Technical Associates 2008
URPC Ethernet Host Module
Revision F 2.25.06      Module 1
Hardware 1.00          Serial number 22222 colilo version 1.05.01

Status.....1          Status of all network options
Serial Port Configuration.....2  Setup the Serial port EIA232
Serial Port Device Name.....3    Change the EIA232 port name
Attention Character.....4        Type 5 times to access Network Main menu.
Disconnect Timeguard.....5      Data received within the delay period,
                                 is data, not attention character; thereby
                                 preventing unwanted port disconnection
Connect Port ID Echo.....6      Echo port name or module# & port#
Login Setup.....7              Login Menu Serial/Telnet/Radius/TACACS
                                 access control, manage users
Network Port Configuration.....8  Network Port IP Address
Module Name.....9              Change name of module
MSP Management.....10          Set up Voltage/Current/Sensor threshold
Firmware / Config Download.....11 Update Firmware, SSL, Configuration files
Exit.....X,CR
Enter Request :
```

## Login Setup Menu

Figure 9: Network Login Setup

```

Access Control.....1
Manage Users.....2
Radius Configuration.....3
TACACS Configuration.....4
Exit.....X,CR
```

## Access Control

Enable or disable usernames and passwords for both network and serial port access. If either login has been enabled you will get a prompt similar to the following:

Figure 10: Network Access Control

```

Telnet Login Prompt Enable/Disable..1
Serial Login Prompt Enable/Disable..2
```

Figure 11: Network Login Prompts

```

Universal RPC login:
Password:
```

The default user and password is “root/baytech”, all lower case.

## Manage Users

Add/delete users and change their passwords. Usernames and passwords are case sensitive and alphanumeric. **The root user can not be removed.**

Figure 12: Network Manage User

```
User Management Menu
To change user password or port access, enter number of user.
To add/delete user, select appropriate menu choice.
SNMP V3 requires passwords that are between 8 and 31 characters long
Enter request, CR to exit menus.
  A)...Add user
  1)...root
```

## Network Port Configuration

For network access, you must configure the IP addresses, Subnet Mask, and Gateway Address, or enable the DHCP. The Changes must be saved and the module reset for network changes to take effect.

Figure 13: Network Port Configuration

```
Network setup :
Ethernet Address..... 00:C0:48:00:01:FD
IP Address..... 70.150.140.89
Subnet Mask..... 255.255.255.224
Default Gateway..... 70.150.140.65

Connection Inactivity Timeout (mins): Disabled
Carriage Return Translation: Enabled
Break Length (msecs): 350
DHCP is Disabled  Telnet is Enabled  SSH is Enabled
SSH host keys are set to factory default

IPv4 Configuration.....1
IPv6 Configuration.....2
Inactivity Timeout.....3
Carriage Return Translation.....4
Break Length.....5
DHCP Enable/Disable.....6
Telnet Enable/Disable.....7
SSH Enable/Disable.....8
SSH Host Key Generation.....9
IP Filter Configuration.....10
SNMP Configuration.....11
Web Server Configuration.....12
Exit.....X,CR

Enter Request :
```



## Quick Start for MSPr100 ATS part

Connect to your unit and type the attention character 5-times at the prompt. You should see the following menu. At the Prompt Type '1' and press Enter.

```
Module: 1
Attention Character: ;
MSPr100 ( 2,1).....1
Status.....S
Configure.....C
Unit Reset.....RU
Logout.....T
Enter Request : 1
```

You should see a similar screen.

```
Operating Voltage: 120.0 Volts,
Current Active Source: 1
Source 1 RMS Voltage: 121.5
Source 2 RMS Voltage: 121.6
Load RMS Voltage: 121.5

Total kW-h: 33956474

-----
| Circuit | True RMS | Peak RMS | Average | Volt- |
| Breaker | Current | Current | Power | Amps |
|-----|-----|-----|-----|-----|
| CKT1 | 0.1 | 0.3 | 0 | 18 |
|-----|-----|-----|-----|-----|

Int. Temp: 97.7 F
Switch 1: Open 2: Open

1)...MOD 1 Outlet 1 : On Locked 2)...MOD 1 Outlet 2 : On Locked
3)...MOD 1 Outlet 3 : On Locked 4)...MOD 1 Outlet 4 : On Locked
5)...MOD 1 Outlet 5 : On Locked 6)...MOD 2 Outlet 1 : On Locked
7)...MOD 2 Outlet 2 : On Locked 8)...MOD 2 Outlet 3 : On Locked
9)...MOD 2 Outlet 4 : On Locked 10)...MOD 2 Outlet 5 : On Locked

Type Help for a list of commands

MSP-100> config
```

At the prompt type 'config' and press Enter

NOTE: None Redundant units do not have options 8 and 9. Should see the following menu:

```
1)...Manage Users
2)...Change Outlet Name
3)...Enable/Disable Confirmation
4)...Enable/Disable Status Menu
5)...Change Unit ID
6)...Change Alarm Threshold
7)...Change Display Orientation
8)...Change Redundant Power Switch Back mode/time
9)...Change Redundant Power Switching Brownout Voltage Levels
X)...Exit
Enter Request: 8
```

At the prompt type '8' and press Enter

If you get the following response, type “n” and press Enter, if you want the unit to automatically switch-back to the primary source. It will tell you the current delay time and you can change the delay time.

```
Disable switch back to primary (Y/N)? N
Current delay switch back to primary source time is(0= minimum):    0 Seconds
Change delay switch back time (Y/N)?y
Enter seconds (0-6500):
```

If you type ‘Y’ to DISABLE the switch-back, you will have to manually switch the input source by typing ‘source 1’ at the MMP100 prompt.

If you get the following response, type “y” and press Enter. Change the delay time if needed.

```
Enable switch back to primary (Y/N)? y
Current delay switch back to primary source time is(0= minimum):    0 Seconds
Change delay switch back time (Y/N)?y
Enter seconds (0-6500):
```

After pressing Enter you get to the configure menu.

```
1)...Manage Users
2)...Change Outlet Name
3)...Enable/Disable Confirmation
4)...Enable/Disable Status Menu
5)...Change Unit ID
6)...Change Alarm Threshold
7)...Change Display Orientation
8)...Change Redundant Power Switch Back mode/time
9)...Change Redundant Power Switching Brownout Voltage Levels
X)...Exit
Enter Request:9
```

Type ‘9’ at the prompt and press Enter to see the Brownout setting for Primary to Secondary. Then you will be asked to set the Secondary to primary value..

```
Primary to Secondary trip voltage value : 100.0 Volts
Modify (Y/N)?
Secondary to Primary return voltage value : 100.0 Volts
Modify (Y/N)?
```

## Network Menu Options

Select each menu option, press 'Enter', then select next option and press 'Enter', i.e. {Network Status: (C/1), type 'C' (Configure) at prompt and press 'Enter', type '1' (Status) at prompt, and press 'Enter'.

PD Unit (2,1): **(1)**

Type **config**

Manage Users: **(1)**

Change Outlet Name: **(2)**

Enable/Disable Confirmation: **(3)**

Enable/Disable Status Menu : **(4)**

Change Unit ID: **(5)**

Change Alarm Threshold: **(6)**

Change Display Orientation: **(7)**

Change Redundant Power Switch Back mode/time; **{redundant power only}: (8)**

Change Redundant Power Switching Brownout Voltage Levels; **{redundant power only}: (9)**

Type **help**:

PD Unit (2,2): **(2)**

Network Status: **(S)**

Network Configure: **(C)**

Status: **(C/1)**

Serial Port Configuration: **(C/2)**

Handshaking: **(C/2/1)**

Baud Rate: **(C/2/2)**

Word Size: **(C/2/3)**

Stop Bits: **(C/2/4)**

Parity: **(C/2/5)**

RTS Line Driver Inactive State: **(C/2/6)**

DTR Line Driver Inactive State: **(C/2/7)**

Serial Port Device Name: **(C/3)**

Attention Character: **(C/4)**

Disconnect Timeguard: **(C/5)**

Connect Port ID Echo: **(C/6)**

Disable Port ID Echo: **(C/6/1)**

Use Module, Port Number: **(C/6/2)**

Use Device Name: **(C/6/3)**

Login Setup: **(C/7)**

Access Control: **(C/7/1)**

Radius Configuration: **(C/7/3)**

TACACS Configuration: **(C/7/4)**

Network Port Configuration: **(C/8)** with IPv6

IPv4 Configuration: **(C/8/1)**

IPv6 Configuration: **(C/8/2)**

Inactivity Timeout: **(C/8/3)**

Carriage Return Translation: **(C/8/4)**

Break Length: **(C/8/5)**

DHCP Enable/Disable: **(C/8/6)**

Telnet Enable/Disable: **(C/8/7)**

SSH Enable/Disable: **(C/8/8)**

SSH Host Key Generation: **(C/8/9)**

IP Filter Configuration: **(C/8/10)**

SNMP Configuration: **(C/8/11)**

Web Server Configuration: **(C/8/12)**

Module Name: **(C/9)**

RPC Management: **(C/10)**

Temperature Alarm Threshold: **(C/10/1)**

Under Voltage Alarm Threshold: (C/10/2)

Over Voltage Alarm Threshold: (C/10/3)

Low Current Alarm Threshold: (C/10/4)

Environmental Sensors: (C/10/5)

Outlet Groups: (C/10/6)

Temperature units (degrees C/F): (C/10/7)

RPC Cascade Mode: (C/10/8)

Power Factor Threshold: (C/10/9)

Firmware / Config Download: (C/11)

Enable Firmware Upgrade: (C/11/1)

Enable SSL Cert Upload: (C/11/2)

Enable Configuration File Upload: (C/11/3)

Restore Configuration Defaults: (C/11/4)

Get Current Configuration File: (C/11/5)

Display Configuration Error Log: (C/11/6)

Enable Rel Ctl. Firmware Upgrade: (C/11/7)

Unit Reset: (RU)

Logout: (T)

**End of Quick Start Manual**